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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,616	09/08/2000	HIROKATSU MIYATA	35.C14776	2679

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[REDACTED] EXAMINER

VO, HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 07/05/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-9

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/657,616	MIYATA, HIROKATSU
Examiner	Art Unit	
Hai Vo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-36 is/are pending in the application.
  - 4a) Of the above claim(s) 1-22 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 23-36 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
 

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5 and 6</u> . | 6) <input type="checkbox"/> Other: _____ .                                   |

***Election/Restrictions***

1. Applicant's election with traverse of Group II in Paper No. 8 is acknowledged. The traversal is on the ground(s) that the process as claimed cannot be used to make products other than those claimed in Group II directed to a thin film. This is not found persuasive because what Applicant argues is irrelevant to the Examiner's reasoning. In the written restriction letter mailed on 05/22/02, the examiner shows that the inventions I and II are distinct because the product as claimed can be made by another and materially different process such as a process as taught by Ozin et al (US 6,027,666).

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 23-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 23, the phrase "rod-like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "rod-like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 23-30, 32, 33, and 35 are rejected under 35 U.S.C. 102(a) and 102(e) as being anticipated by Ozin et al (US 6,027,666). Ozin discloses a mesostructured material having tubular mesopores formed on high density polyethylene (HDPE) (column 5, lines 59-64; column 9, lines 22-25). Polyethylene contains a sequence of two or more adjacent methylene groups in a molecular structure of the repeating unit. With regard to claims 24, 32 and 33, they are product-by-process claims. It is the examiner's position that the mesostructured material of Ozin is identical to the claimed mesostructured thin film prepared by the method of the claim, because both thin films having similar tubular pore structure and being formed on the same

support film. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289,291 (Fed. Cir. 1983). The Ozin reference anticipated the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with Ozin. With regard to claims 25 and 26, since Ozin is using the same material on which the mesostructured thin film is deposited as Applicant, i.e., HDPE having a sequence of two or more adjacent methylene groups in a molecular structure of the repeating unit, it is the examiner's position that the orientation of the support material would be inherently present. With regard to claim 28, Ozin discloses the mesostructured material contains silicon (column 7, lines 25-27). With regard to claims 29 and 30, Ozin discloses the mesostructured material being formed by hydrolyzing a silicone alkoxide in the presence of surfactant (column 5, lines 26-34). Ozin anticipates the claimed subject matter.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
7. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozin et al (US 6,027,666) as applied to claim 23 above, in view of Itoh et al (US 4,919,810).

Ozin fails to disclose a mesostructured silica having the hollow mesopores. Itoh discloses that it is known in the art to have hollow mesopores for the purpose of having another structure of the mesoporous silica material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the mesostructured material of Ozin contain hollow mesopores as suggested by Itoh motivated by the desire to have another structure of the mesoporous silica material.
8. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozin et al (US 6,027,666) as applied to claim 23 above, in view of Ward et al (US 3,962,205).

Ozin is silent as to the number of a sequence of adjacent methylene groups in the repeating unit of the HDPE. Ward discloses an oriented high density polyethylene having a molecular weight of less than 200,000 (abstract). However, the molecular weight is directly proportional to the number of methylene groups in the repeating unit of the polyethylene and related to molecular orientation of the polymer and thus

such as variable would have been recognized by one skilled in the art to control the degree of molecular orientation of the polymer. As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the claimed number of methylene group in the repeating unit of the HDPE, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

*In re Aller*, 105 USPQ 233.

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozin et al (US 6,027,666) as applied to claim 23 above in view of Leung et al (US 6,171,687). Ozin is silent as to the sequence of adjacent methylene groups in the repeating unit of the polymer compound contained in the side chain of the polymer compound. Leung teaches an infiltrating nanoporous material **132** comprising a volatile component **136** and a reinforcing component **138** (column 5, lines 24-26). Leung discloses the reinforcing component formed from a super-branched polyimide polymer (column 6, lines 11-20). The super-branched polyimide polymer would have the sequence of adjacent methylene groups in the repeating unit contained in the side chain of the polymer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate into the support film of Ozin a reinforcement material that has the sequence of adjacent methylene groups in the repeating unit of the reinforcement material in the side chain of the reinforcement material as suggested by Leung motivated by the desire to form a good orientation of the mesoporous material film.

***Priority***

10. Applicant cannot rely upon the foreign priority paper to overcome this rejection (Ozin in view of Leung) because a translation of said paper (JP 11-257351) has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on Monday to Friday, 8:30 to 5:00 (EAST). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

HV  
June 26, 2002



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